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CLAIMS

1. A mounting device for a disk drive unit, the mounting device comprising:

5 a carrier module constructed and arranged to receive at least one disk drive unit, the carrier module having an air input port, the carrier module being arranged to direct air from the air input port over a disk drive unit received in the carrier module;

10 a temperature control module comprising an air flow control device, the temperature control module having an air output port; and,

a connection device for releasably fastening the carrier module to the temperature control module with the
15 air input port of the carrier module in register with the air output port of the temperature control module,

wherein the temperature control module is arranged to provide air to said air input port for controlling the temperature of a said disk drive unit received in the
20 carrier module to be at a predetermined temperature during operation of the disk drive unit.

2. A mounting device according to Claim 1, wherein the carrier module has an air outlet port and the temperature
25 control module has an air inlet port, the arrangement being such that when the connection device fastens the carrier module to the temperature control module the air outlet port of the carrier module is in register width with the air inlet port of the temperature control module.

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3. A mounting device according to Claim 2, wherein the temperature control module has a fan and is arranged to recirculate air from the air outlet port of the carrier

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module to the air output port of the temperature control module.

4. A mounting device according to any preceding claim,
5 wherein the connection device comprises a manually
releasable hinge pivotally connecting the carrier module
and the temperature control module along one edge of the
carrier module and the temperature control module and a
10 lever latch for securing the carrier module to the
temperature control module along an edge of the carrier
module and temperature control module opposite the said one
edge.

5. A mounting device according to Claim 4, wherein the
15 manually releasable hinge has a pin portion, a receptacle
portion and a hook member, the pin portion being secured to
and supported substantially parallel to and spaced from a
wall of one of said the carrier module and temperature
control module, the receptacle portion being formed on the
20 other of the carrier module and the temperature control
module, the receptacle portion being constructed and
arranged to engage said pin portion, the receptacle portion
having a curved wall for abutment by the pin portion and
the receptacle formation defining an opening such that the
25 pin portion may be brought into engagement with the curved
wall of the receptacle portion via the opening, and the
hook member being constructed and arranged to engage the
carrier module and the temperature control module to retain
the pin portion in engagement with the curved wall of the
30 receptacle portion.

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6. A mounting device according to any preceding claim, wherein the carrier module is constructed and arranged to simultaneously receive plural disk drive units.

5 7. A mounting device according to Claim 6, comprising air flow passages arranged to divide air flow from the output port of the temperature control module for application to each of plural disk drive units received in the carrier module.

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8. A mounting device according to Claim 6 or 7, having air flow passages arranged to combine the air flow from each of plural disk drive units received in the carrier module to provide a single air flow from the carrier

15 module.

9. A mounting device according to Claim 7, wherein the passages are arranged to divide the air flow such that air flows in the same direction around each disk drive unit.

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10. A mounting device according to any of Claims 7 to 9, comprising a baffle that provides said air flow passages, the baffle having a first side having at least one opening for receiving an incoming air flow from the temperature control module, and a second side having plural openings for supplying air to each of plural disk drive units received in the carrier module, the baffle having a deflection structure constructed and arranged to divide the incoming air flow between said plural disk drive units.

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11. A mounting device according to Claim 10, wherein the second side of the baffle has plural further openings for receiving air from that has flowed over plural disk drive

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units received in the carrier module, and the first side of the baffle has at least one opening for passing said air to the temperature control module.

5 12. A mounting device for disk drive units according to Claim 11, wherein at said second side of said baffle, said openings and said further openings are interleaved, whereby each of the plural disk drive units has a similar flow of air.

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13. A mounting device for disk drive units according to any of Claims 1-5, wherein the temperature control module has an electrical connection device, the carrier module has a first electrical connector for engaging a disk drive unit
15 received in the carrier module, and the carrier module has a second electrical connector arranged to engage the electrical connection device of the temperature control module when the temperature control module and the carrier module are fastened together.

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14. A mounting device for disk drive units according to any of Claims 1-12, wherein the temperature control module has an electrical connection device, and the carrier module has plural first electrical connectors for engaging
25 respective disk drive units received in the carrier module and a second electrical connector arranged to engage the electrical connection device of the temperature control module when the temperature control module and the carrier module are fastened together.

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15. A releasable fastener for fastening together first and second members, the fastener comprising a pin portion for mounting on a first member, a receptacle portion for

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mounting on a second member and a hook member for engagement with a said first and second member, the receptacle portion being constructed and arranged to engage said pin portion, the receptacle portion having a concave curved wall and defining an opening such that the pin portion may be brought into engagement with the curved wall of the receptacle formation via the opening, and the hook member being constructed and arranged to retain the pin portion engaged with the curved wall of the receptacle portion.

16. A releasable fastener according to Claim 15, wherein the arrangement is such that the hook member is under tension when engaged with a said first and second member.

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17. A method of testing a disk drive unit in a test device comprising a temperature control module and a carrier module constructed and arranged to support said disk drive unit, wherein the carrier module has an air input port and is arranged to direct air from the air input port over a said disk drive unit received in the carrier module and the temperature control module comprises an air flow control device and has an air output port, the method comprising:

releasably fastening the carrier module to the temperature control module, such that the air input port of the carrier module is in register with the air output port of the temperature control module;

disposing said disk drive unit in said carrier module; and,

causing the temperature control module to provide air to said air input port to control the temperature of said disk drive unit disposed in the carrier module to be at a

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predetermined temperature during operation of the disk drive unit.

18. A method of testing a disk drive unit according to
5 Claim 17, comprising the step of controlling the flow of
air across the disk drive unit to cause air to recirculate
directly across the disk drive unit, or to cause chilled
air obtained by passing at least a portion of the air that
has passed over the disk drive unit through a heat
10 exchanger to flow across the disk drive unit, or to cause a
mixture of directly recirculating air and chilled air to
flow across the disk drive unit.

19. A method of testing a disk drive unit according to
15 Claim 17 or 18, wherein the temperature control module and
the carrier module each have a respective part of a manual
release hinge and the step of releasably fastening
comprises engaging the two parts of the hinge, mutually
pivotally moving the carrier module and the temperature
20 control module until they abut one another and securing the
carrier module to the temperature control module via a
lever latch.

20. A method of testing a disk drive unit according to any
25 of Claims 17 to 19, wherein the carrier module has
locations constructed and arranged to simultaneously
receive plural disk drive units, and the disposing step
comprises disposing at least two disk drive units in
respective ones of said locations.

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21. A method of testing a disk drive unit according to any
of Claims 17 to 20, comprising dividing air flow from the
outlet of the temperature control module and applying a

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part of said divided air flow to each of plural disk drive units received in the carrier module, and combining the air flow from each of the disk drive units to provide said outlet from the carrier module.

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22. A method of testing a disk drive unit according to Claim 21, wherein the dividing step comprises dividing the air flow such that it flows in the same direction around each disk drive unit.

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23. A method of testing a disk drive unit according to any of Claims 17 to 22, comprising providing plural types of carrier module, each type of module being suitable for a respective one of plural different types of disk drive

15 unit.

24. A method of testing a disk drive unit according to any of Claims 17 to 23, wherein the temperature control module has an electrical connection device, the carrier module has a first electrical connector secured thereto for engaging a disk drive unit received in the carrier module, and a second electrical connector arranged to engage the electrical connection device of the temperature control module when the temperature control module and the carrier module are secured together, and said step of disposing comprises connecting the electrical connection device of the disk drive unit to said first electrical connector.

25. A method of testing a disk drive unit according to Claim 24, wherein each of said different types of disk drive unit has an electrical connection device which is at least one of differently disposed or differently configured to electrical connection devices of others of said types of

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disk drive units, the temperature control module has an electrical connection device, each type of carrier module has a respective first electrical connector secured thereto for engaging the electrical connection device of the

5 corresponding type of disk drive unit received in the carrier module, and a second electrical connector arranged to engage the electrical connection device of the temperature control module when the temperature control module and the carrier module are secured together, and

10 said step of disposing comprises connecting the electrical connection device of the disk drive unit to said first electrical connector.